DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-022067
Date Inspected: 30-Nov-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	Geng Wei, Qiu Wen	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes ☐ No ☑ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 14, OBG (NWIT # 7561)

This QA inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

VP3007-001-011, 012, 024, 025, 037, 038, 050, 051, 063, 064, 076, 077
SEG3013AD-023, 024

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

SEGMENT 13AE (B-WR17556)
Repair welding by SMAW process of weld joint SEG3007G-017 joining Floor Beam (FB) to Longitudinal Diaphragm (LD) at panel point (PP) 119+1500 of segment 13AE. Welder is identified as 215553. ZPMC QC is

identified as Mr. Zhong Yong Gang. The welding variables recorded by QC appeared to comply with WPS-345-SMAW-3G(3F)-FCM-REPAIR-1.

SEGMENT 14E (B-CWR2231)
Repair welding by FCAW (ESAB) process of weld joint SEG3091AB-091 joining Longitudinal Diaphragm (LD) 3042A to Bottom plate of segment 14E. Welder is identified as 062782. ZPMC QC is identified as Mr. Zhong Yong Gang. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-2G(2F)-ESAB-REPAIR.

SEGMENT 14E (B-CWR2232)
Repair welding by FCAW (ESAB) process of weld joint SEG3091AB-092 joining Longitudinal Diaphragm (LD) 3042A to Bottom plate of segment 14E. Welder is identified as 062782. ZPMC QC is identified as Mr. Zhong Yong Gang. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-2G(2F)-ESAB-REPAIR.

SEGMENT 14E (B-CWR2088)
Repair welding by FCAW (ESAB) process of weld joint SEG3091AB-093 joining Longitudinal Diaphragm (LD) 3042A to Bottom plate of segment 14E. Welder is identified as 062782. ZPMC QC is identified as Mr. Zhong Yong Gang. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-2G(2F)-ESAB-REPAIR.

SEGMENT 14E (B-CWR2090)
Repair welding by FCAW (ESAB) process of weld joint SEG3091AB-095 joining Longitudinal Diaphragm (LD) 3042A to Bottom plate of segment 14E. Welder is identified as 062782. ZPMC QC is identified as Mr. Zhong Yong Gang. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-2G(2F)-ESAB-REPAIR.

SEGMENT 14E (B-CWR2091)
Repair welding by FCAW (ESAB) process of weld joint SEG3091AB-096 joining Longitudinal Diaphragm (LD) 3042A to Bottom plate of segment 14E. Welder is identified as 062782. ZPMC QC is identified as Mr. Zhong Yong Gang. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-2G(2F)-ESAB-REPAIR.

During the Quality Assurance in process visual inspection of OBG lift 13, this Quality Assurance (QA) Inspector discovered the following issues:

Segment 13AW:
-The welding and fit up has been carried out without the removal of primer undercoat from the surface of the material during assembly.
-The components are identified as follows:
-Sub-assemblies SA3180B, SA3181B and SA3158B joining to Floor Beam FB3192A at panel point 119+1500.
- Sub-assemblies SA3180A, SA3181A, SA3158A, SA3180B, SA3181B and SA3158B joining to Floor Beam FB3188A at panel point 119.
- Sub-assemblies SA3180A, SA3181A and SA3158A joining to Floor Beam FB3185A at panel point 119-1500.

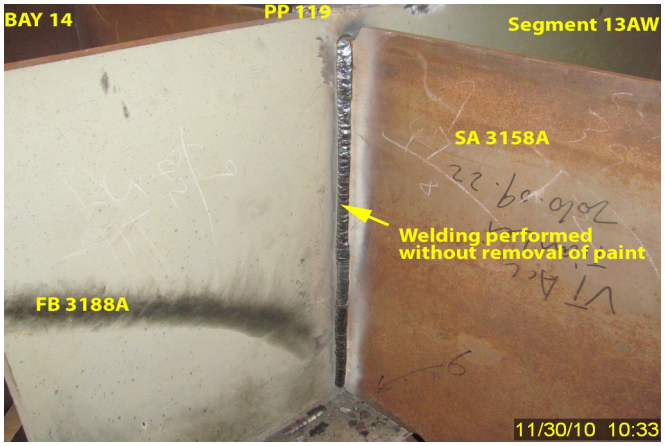
- Sub-assemblies SA3185A, SA3185B, X4445A and X4445B joining to side panel SP3091 at the FL3/Cross Beam side.

Segment 13AE:
-The welding and fit up has been carried out without the removal of primer undercoat from the surface of the material during assembly.
-The welds joining the components are identified as follows:
- Sub-assemblies SA3014B, SA3015B and SA3092B joining the Floor Beam FB3125A at panel point 119+1500.
- Sub-assemblies SA3014A, SA3015A, SA3092A, SA3014B, SA3015B and SA3092B joining the Floor Beam FB3109A at panel point 119.
- Sub-assemblies SA3014A, SA3015A and SA3092A joining the Floor Beam FB3122A at panel point 119-1500.
- Sub-assemblies X3497A, X3497B, SA7014A and SA7014B joining the side panel SP3059 at the FL3/Cross Beam side.

-Dry film thickness (DFT) measurements taken in way of the welded and fit-up members averaged 120µm
-The members are located in fabrication Bay 14.

-Attached photographs provide additional location and details.
This issue has an incident report.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



WELDING INSPECTION REPORT

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Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Patterson,Rodney	QA Reviewer